

## Certificate of Analysis

**Product Name:** Melatonin

CAS Number: 73-31-4

IUPAC Name: *N*-Acetyl-5-methoxytryptamine

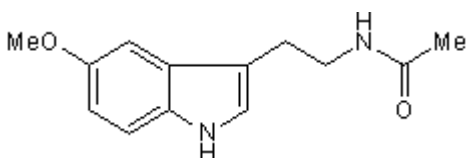
**Catalog No.:** 3550

EC Number: 200-797-7

**Batch No.:** 1

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 232.28  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 50 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 100% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	67.22	6.94	12.06
Found	67.28	6.77	12.08

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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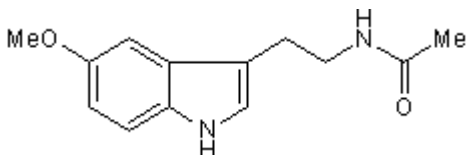
**Batch No.:** 1**Description:**

Endogenous hormone that acts as an agonist at melatonin receptors MT<sub>1</sub> and MT<sub>2</sub>. Exhibits a prominent role in the control of circadian rhythm, displays immunomodulatory activity and acts as a powerful antioxidant in vivo.

**Physical and Chemical Properties:**Batch Molecular Formula: C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>

Batch Molecular Weight: 232.28

Physical Appearance: White solid

**Minimum Purity:** >99%**Batch Molecular Structure:****Storage:** Store at -20°C**Solubility & Usage Info:**

DMSO to 50 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Bubenik** (2008) Thirty four years since the discovery of gastrointestinal melatonin. *J.Physiol.Pharmacol.* **59** 33. PMID: 18812627.

**Fischer et al** (2008) Melatonin as a major skin protectant: from free radical scavenging to DNA damage repair. *Exp.Dermatol.* **17** 713. PMID: 18643846.

**Cardinali et al** (2009) Melatonin and melatonergic drugs on sleep: possible mechanisms of action. *Int.J.Neurosci.* **119** 821. PMID: 19326288.

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